Incorporating Career Clusters and Pathways to Assist in Academic and Career Planning

The Virginia Department of Education provides a wealth of information on academic and career planning. The information can be accessed at www.doe.virginia.gov . A number of the resources are listed below.

Career Cluster and Pathways

Career Clusters help students investigate careers and design their courses of study to advance their career goals. A Career Cluster is a grouping of occupations and broad industries based on commonalities.

Virginia has adopted the nationally accepted structure of career clusters, career pathways and sample career specialties or occupations. Sixteen career clusters provide an organizing tool for schools, small learning communities, academies and magnet schools.

Within each career cluster, there are multiple career pathways that represent a common set of skills and knowledge, both academic and technical, necessary to pursue a full range of career opportunities within that pathway – ranging from entry level to management, including technical and professional career specialties. Based on the skills sets taught, all CTE courses are aligned with one or more career clusters and career pathways.

Academic and Career Plan

The Board of Education included in its 2009 revisions to the Regulations Establishing Standards for Accrediting Public Schools in Virginia, (8 VAC-20-131-5 et seq) provisions for each middle and high school student to have a personal learning plan that aligns academic and career goals with the student's course of study.

Beginning with the 2010-2011 academic year, all schools shall begin development of a personal Academic and Career Plan for each seventh-grade student with completion by the fall of the student's eighth-grade year. The components of the Plan shall include, but not be limited to, the student's program of study for high school graduation and a postsecondary career pathway based on the student's academic and career interests. The Plan shall be included in the student's record and shall be reviewed and updated, if necessary, before the student enters the ninth and eleventh grades.

Resources, including a sample Academic and Career Plan template, Webinars, and a Technical Assistance Document can be found at the Virginia Department of Education web site at this link - http://www.doe.virginia.gov/instruction/graduation/academic_career_plan.shtml .

## **Governor's Career and Technical Academies**

Governor's Career and Technical Academies in Virginia are programs designed to expand options for the general student population to acquire STEM (Science, Technology, Engineering and Mathematics) literacy and other critical skills, knowledge and credentials that will prepare them for high-demand, high-wage, and high-skill careers in Virginia. Each academy is a partnership among school divisions, postsecondary institutions and business and industry.

Graduates of the Governor's Career and Technical Academies complete the program by meeting one or more of the following benchmarks:

- Earning an industry certification or state occupational license;
- Demonstrating competency on an assessment recognized by postsecondary institutions such as College-Level Examination Program (CLEP), or college placement tests;
- Earning at least 9 transferable college credits as defined by the Early College Scholars program including dual enrollment and Advanced Placement; and/or
- Earning an associate degree.

r u ready? Life After High School

http://www.cteresource.org/verso2/other/item/74A career resource magazine distributed to all juniors at Virginia's public schools. This publication emphasizes the importance of preparing now for the future and is designed to provide information for students with a variety of post-secondary goals, whether the choices are to enter the job market following high school or to continue formal education. Regardless of their career goal, all students will benefit from resources available in Virginia's high schools to prepare for the journey ahead.

ru ready? Parent's Guide
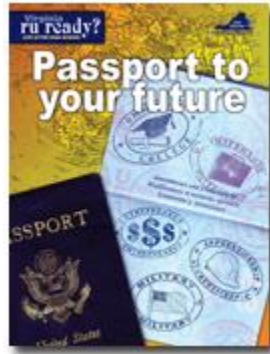
http://www.cteresource.org/verso2/other/item/89A brochure for the parents/guardians of 8th grade students who want to engage with their children about life after high school, postsecondary opportunities, and careers.

Ready or Not- Teachers Resource Guide

An excellent resource for teachers who wish to incorporate the contents of the *ru ready?* magazine in their classrooms.
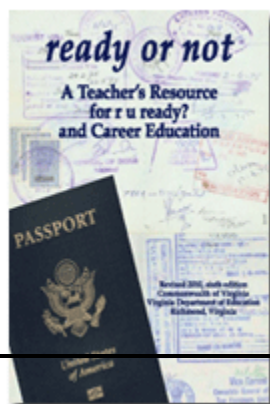
Economics Education & Financial Literacy Objectives

Code of Virginia §22.1–200.03 required the Board of Education to develop and approve objectives for economics education and financial literacy to be required of all students at the middle and high school levels to further the development of knowledge, skills, and attitudes needed for responsible citizenship in a constitutional democracy. On April 26, 2006, the Board of Education adopted these objectives, which are correlated to the Mathematics Standards of Learning, the History and Social Sciences Standards of Learning and the Career and Technical Education competencies. Information and resources are located at -
http://www.doe.virginia.gov/instruction/economics_personal_finance/index.shtml

Planning and Implementing Career and Technical Education (CTE) Programs in Virginia
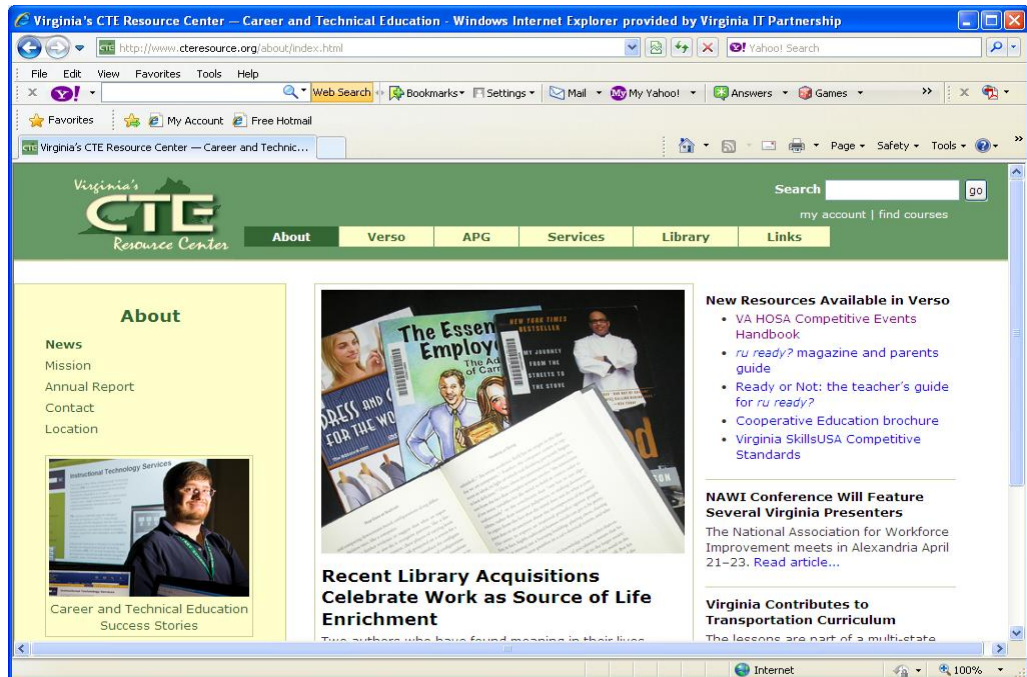
Development and Implementation of CTE Programs in Local Divisions

- **Program Areas:** Local divisions have numerous choices of courses/programs within eight CTE program areas:

  - Agricultural Education

  - Business and Information Technology

  - Career Connections

  - Family and Consumer Sciences

  - Health and Medical Sciences

  - Marketing

  - Technology Education

  - Trade and Industrial Education

- **Adding Courses/Programs at the Local Level:** Determining Career and Technical Education courses/programs to be offered in local school divisions requires an application be submitted for approval by the Virginia Department of Education, Office of Career and Technical Education. Supporting documentation must be provided:

  - **Student Interest Survey.** It is recommended that the survey be conducted in Grades 6 through 11.

  - **Labor Market Information.** At a minimum, this must be local information, but can be expanded to regional, state, and national as appropriate. A state-level Perkins Leadership initiative provides a Web site where this information can be found. The Web site is maintained by the Weldon Cooper Center, University of Virginia.

    - Trailblazers (formerly Career Prospects in Virginia) – is created by staff at the Demographics and Workforce Section of the Weldon Cooper Center for Public Service at the University of Virginia. It is an online resource to help teachers, administrators and school divisions to meet the federal Perkins grant mandates in order to qualify for federal Perkins grants. In addition, this site provides useful new employment

projections, data and research that is being published all the time (look under "administrators").

- **Collaboration with Business/Industry and Postsecondary Education:** School divisions fulfill this part of their development and implementation process through:
  - Advisory Committee(s). State regulations require that school divisions have these committees with members representing all stakeholders in the program.
  - Plans of Study. This requirement was begun with the authorization of the Carl D. Perkins Career and Technical Education Act of 2006.
    - A minimum of one Plan of Study must be developed each year until a local division has a Plan of Study for every CTE program offered in the division.
    - Samples for all 79 career pathways within the sixteen national career clusters have been developed by the Office of Career and Technical Education which divisions may use OR they may develop their own based on these models.
    - These Plans of Study must be developed in conjunction with a postsecondary institution and either the Vice-President of Academic Services or Tech Prep director must sign the plan before submission to the Virginia Department of Education. (See also Career Clusters and Career Pathways on page
  - **Perkins Local Plan Application:** As part of the process for obtaining local Perkins funds, a local division must develop a Local Plan and Budget Application. Local Plan 2010-2011 (XLS)
    - *February 5, 2010* – Superintendent's Memo #025-09, Perkins Local Plan and Budget for Career and Technical Education

- **Curriculum:** Local divisions are also required to utilize state-mandated curriculum.

- The CTE Curriculum Resource Center supports career and technical and occupational-technical preparation programs by providing resources for curriculum development and program design and implementation in response to the Carl D. Perkins Career and Technical Education Act. To accomplish this mission, the CTE Resource Center supplies products and services at no charge to public secondary career and technical programs throughout the state. Established in 1982 to assist in the design and implementation of competency-based career and technical programs, the Center is funded through the Carl D. Perkins Act and administered for the Virginia Department of Education by Henrico County Public Schools. Educators may request products and services online through our Web site, via e-mail, in person, or by mail, telephone, or fax.
- Each year, the CTE Resource Center assists the Virginia Department of Education in developing curriculum-related publications that address specific courses or programs, encourage collaboration between career/technical and academic disciplines, foster collaboration between career and technical education at the secondary and post-secondary levels, correlate with national standards and industry certification requirements, and enhance comprehensive school-improvement efforts. Staff members perform research, facilitate curriculum development

teams and technical panels to incorporate business/industry input, write, edit, organize, design, produce, and distribute the following materials:

- Validated task lists
- Curriculum frameworks
- Instructional aids
- Program marketing/recruitment aids
- Administrative guides

Teachers and administrators use these products as well as other Center resources to develop or improve local programs.

## **Career Cluster and Career Pathways**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. Sixteen career clusters provide an organizing tool for schools, small learning communities, academies and magnet schools.

Within each career cluster, there are multiple career pathways that represent a common set of skills and knowledge, both academic and technical, necessary to pursue a full range of career opportunities within that pathway – ranging from entry level to management, including technical and professional career specialties. Based on the skills sets taught, all CTE courses are aligned with one or more career clusters and career pathways.

- OVERVIEW: Career Clusters / Pathways / Plans of Study / Academic & Career Plans (PPT) This PowerPoint presentation describes the integration of career clusters into the career exploration and preparation process in Virginia (updated Feb. 2010). *NOTE: this is a large file that will take time to download.*

- **States' Career Clusters Initiative (SCCI):** The States' Career Clusters Initiative Web site serves as a clearinghouse for Career Clusters research, products, services and technical assistance for implementation of the States' Career Clusters Framework for lifelong learning. The site includes a listing of all 16 career clusters and 79 career pathways.

- **Sample Plans of Study**: School divisions are asked to develop sample plans of study based on the courses offered within their schools, the employment needs of the area, and the post-high school educational opportunities needed for these careers. Once these sample plans are developed, they can be customized to the needs of individual students so that all students have the opportunity to have an individualized plan of study. Use sample plan templates in developing career pathways for these 16 career clusters:

- Agriculture, Food and Natural Resources
- Architecture and Construction
- Arts, A/V Technology and Communications
- Business Management and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science

- Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections and Security
- Manufacturing
- Marketing
- Science, Technology, Engineering and Mathematics
- Transportation, Distribution and Logistics
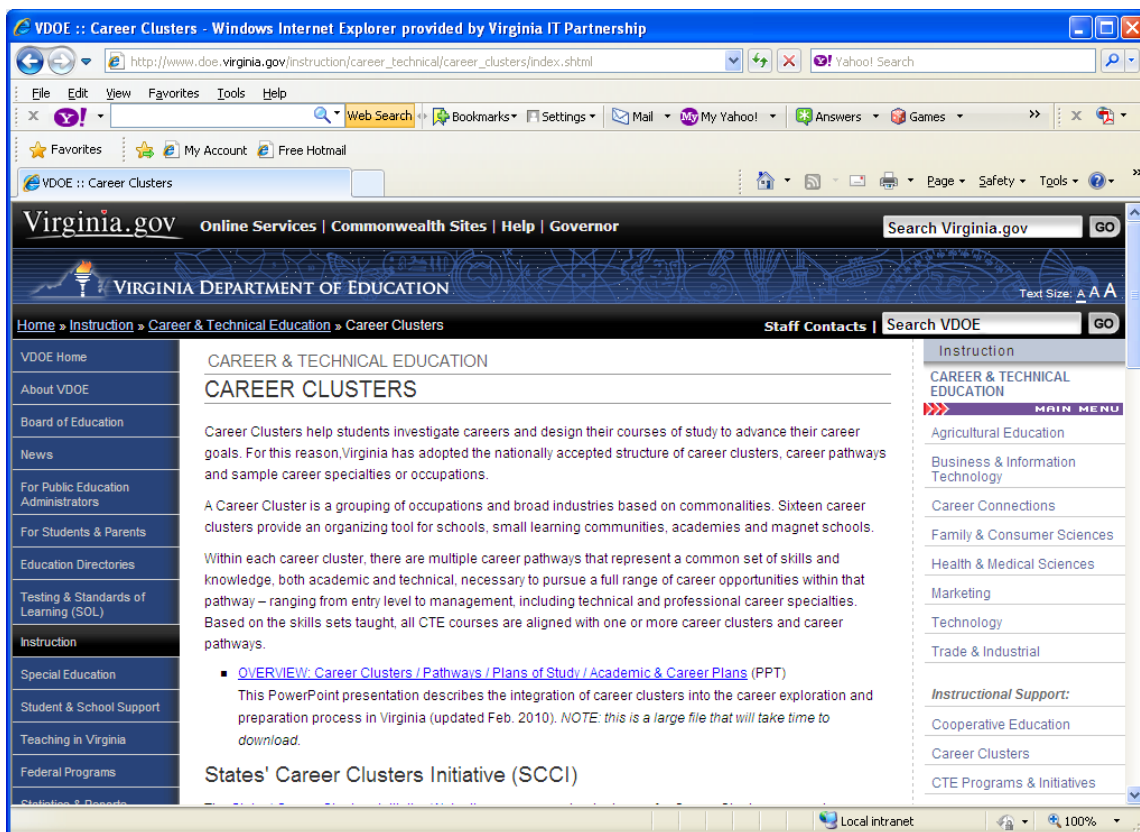
The Path to Industry Certification: High School Industry Credentialing

The Path to Industry Certification: High School Industry Credentialing initiative encourages students to work toward a selected industry credential or state license while pursuing a high school diploma. Students who earn a credential by passing a certification or licensure examination may earn up to two student-selected verified credits to meet graduation requirements.

A credential is defined as:

- a complete industry certification program, e.g., Certified Nursing Assistant (CNA);
- a pathway examination that leads to a completed industry certification, e.g., automotive technician examinations from ASE;
- a state-issued professional license, e.g., Cosmetology;
- an occupational competency examination, e.g., skill assessments from the National Occupational Competency Institute (NOCTI).

The Virginia State Board of Education approves for student-selected verified credit only those examinations that meet the following criteria:

- they must prepare students for an occupation or occupational area;
- they must be knowledge-based, as opposed to performance-based. Credentials may contain a performance-based component, but it is not required;
- they must be in a career and technical education field that confers a credential from a recognized industry, trade, or professional association or entity;
- they must be administered on a multi-state or international basis; and
- they must be standardized and graded independent of the school in which the test is given.

Board of Education-approved [Industry, Professional or Trade Association Certification Examinations and Occupational Competency Assessments to Meet the Requirements for the Board of Education's Career and Technical Education and Advanced Mathematics and Technology Seals and the Student- Selected Verified Credit](#). (PDF)

In addition to providing student-selected verified credit(s) and adding value to a student's résumé for obtaining entry-level positions in today's technical job market, credentials provide the following benefits to students:

- evidence that the student has completed advanced educational preparation by verifying competency in career and technical education skill areas in demand by business and industry;
- increased job opportunities for advancement in a chosen career path; and
- enhanced self-esteem for students through achieving national occupational competency standards recognized by business and industry

When the Virginia Department of Education began identifying industry credentials in 2002, only a small percent of Virginia students were enrolled in courses with the potential for achieving an industry credential. In 2010, all career and technical education course(s) offer training for one or more industry credentials. During the 2008-2009 school year, 19,737 Virginia students passed either industry certification exams, occupational competency tests, or achieved state licensure in areas eligible for student-selected verified credit.

In order for students to use approved credentials for student-selected verified credit, their career and technical education teacher must achieve at least one credential that is "targeted for instruction" in the courses they teach. The Virginia Department of Education provides training for career and technical education instructors interested in earning certification or licensure in selected areas. From 2004 through 2009, 2,627 credentials have been achieved by Virginia career and technical education teachers through state sponsored industry certification training/testing sessions.

Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification; or earn an occupational competency credential from a recognized industry, trade, or professional organization; or acquire a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student-selected verified credit and (ii) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board of Education as an additional test to verify student achievement.

Virginia continues to be a national leader in aligning career and technical education programs with business and industry expectations. Students who earn one or more external credentials have a distinct advantage in entering their chosen field of employment and/or in continuing their career preparation through higher education.

Talk with your school counselor or career and technical education instructor for more information.

Other Resources for Implementing Industry Credentialing may be found at http://www.doe.virginia.gov/instruction/career_technical/path_industry_certification/index.shtml.
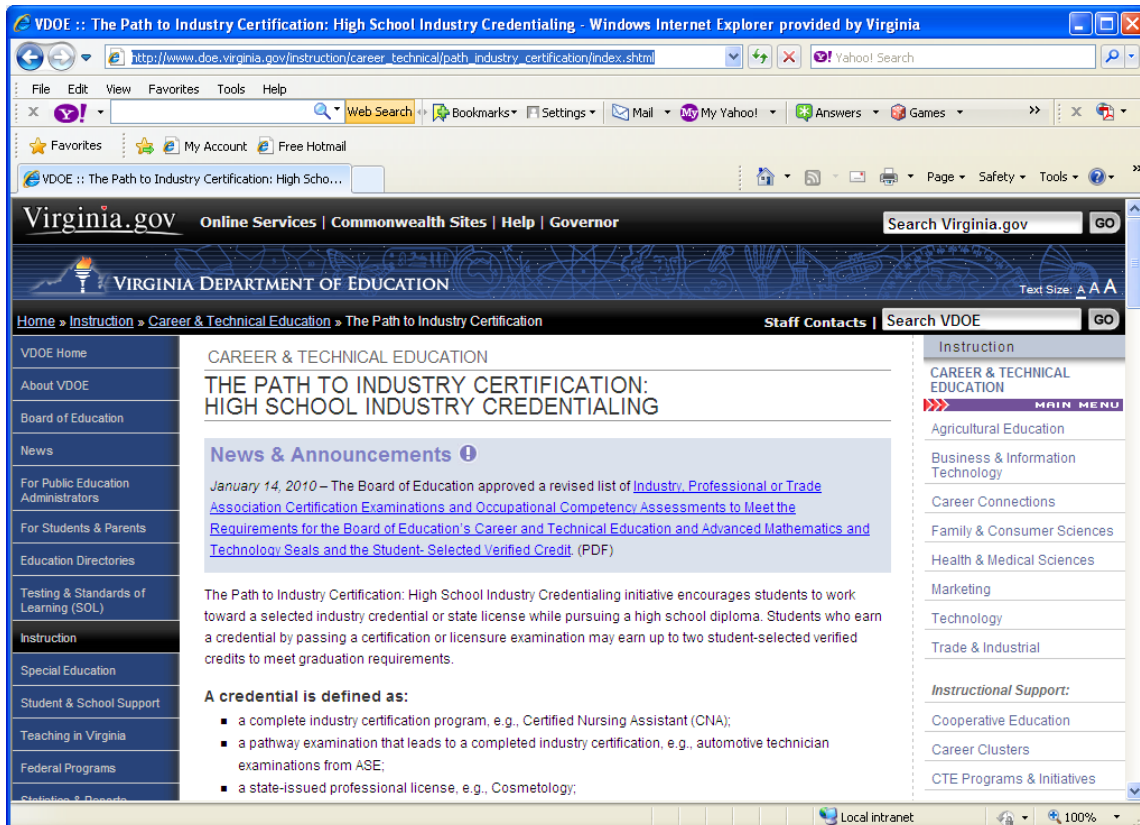
State Career and Technical Education Web Site:
http://www.doe.virginia.gov/instruction/career_technical/index.shtml

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